

UniVerse Skillet™ GAS FIRED FRYING & BRAISING PAN

TECHNICAL MANUAL



MODELS:

30-STGL, 30-STGL-LX, 40-STGL, 40-STGL-LX,
30-STGM, 30-STGM-LX, 40-STGM, 40-STGM-LX

COVERING:

- Installation
- Operation
- Service and Parts

WARNING:

Improper Installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

FOR YOUR SAFETY:

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

In a prominent location, post instructions to be followed in the event the user smells gas. This information shall be obtained by consulting the local gas supplier.



35 Gravey Street | Everett | MA | 02149
Tel: (617) 387-4100 | Fax: (617) 387-4456 | Outside Fax: 1-800-227-2659
Customer E-Mail: custserv@mfii.com | Website: www.mfii.com

TABLE OF CONTENTS

SECTION 1 GENERAL INFORMATION

| | |
|-----------------------------------|-----|
| UniVerse Skillet Spec Sheet | 1-1 |
|-----------------------------------|-----|

SECTION 2 INSTALLATION INSTRUCTIONS

| | |
|--|-----|
| Installation of UniVerse Tilting Skillet (with Pilot) | 2-1 |
| General Installation | 2-1 |
| Installation with Casters | 2-1 |
| Lighting Instructions for Tilting Skillet Pilot and Burners | 2-1 |
| Shutdown Instructions | 2-1 |
| Installation of UniVerse Tilting Skillet (with Pilotless Ignition) | 2-2 |
| General Installation | 2-2 |
| Installation with Casters | 2-3 |
| Lighting Instructions for Tilting Skillet Glow Coil | 2-3 |
| Shutdown Instructions | 2-3 |
| Prolonged Shutdown | 2-3 |

SECTION 3 OPERATING INSTRUCTIONS

| | |
|---|-----|
| Introduction | 3-1 |
| Operation of UniVerse Tilting Skillet (with Pilot) | 3-1 |
| Operation of UniVerse Tilting Skillet (with Pilotless Ignition) | 3-2 |

SECTION 4 TEST KITCHEN BULLETIN

| | |
|--|-----|
| Cooking Facts on Parade | 4-1 |
| Table 4.1 Cooking Portions and Times | 4-2 |

SECTION 5 ILLUSTRATED PARTS LISTS

| | |
|---|-----|
| Table 5.1 UniVerse Skillet, Top Assembly Parts List | 5-1 |
| Table 5.2 UniVerse Skillet, Pan Assembly Parts List | 5-3 |
| Table 5.3 UniVerse Skillet, Standing Pilot Nema Box Assembly Parts List | 5-5 |
| Table 5.4 UniVerse Skillet, Carborundum Nema Box Assembly Parts List | 5-8 |

SECTION 6 TROUBLE-SHOOTING AND MAINTENANCE

| | |
|---|-----|
| Table 6.1 Troubleshooting Guide | 6-1 |
| Calibration of Temperature Control | 6-1 |
| Replacement of Temperature Control | 6-2 |
| Adjustment of Interlock Switch | 6-2 |
| Cleaning and Preventive Maintenance | 6-2 |

LIST OF ILLUSTRATIONS

SECTION 2 INSTALLATION INSTRUCTIONS

| | | |
|------------|--|-----|
| Figure 2.1 | Wiring Diagram, Manual Tilt Standing Pilot Units | 2-4 |
| Figure 2.2 | Wiring Diagram, Power Lift Standing Pilot Units | 2-5 |
| Figure 2.3 | Wiring Diagram, Carborundum Units | 2-6 |

SECTION 5 ILLUSTRATED PARTS LISTS

| | | |
|------------|--|-----|
| Figure 5.1 | UniVerse Skillet, Top Assembly | 5-2 |
| Figure 5.2 | UniVerse Skillet, Pan Assembly | 5-4 |
| Figure 5.3 | UniVerse Skillet, Standing Pilot Nema Box Assembly | 5-5 |
| Figure 5.4 | UniVerse Skillet, Carborundum Nema Box Assembly | 5-6 |

SECTION 6 TROUBLE-SHOOTING AND MAINTENANCE

| | | |
|------------|---|-----|
| Figure 6.1 | Temperature Control Circuit Board | 6-1 |
|------------|---|-----|

SUMMARY OF SAFETY NOTICES

MODELS: 30-STGL, 30-STGL-LX, 40-STGL, 40-STGL-LX, Open-Leg Gas UniVerse Skillet
30-STGM, 30-STGM-LX, 40-STGM, 40-STGM-LX, Modular Gas UniVerse Skillet

The following general safety notices supplement the specific warnings and cautions contained in this technical manual. They are recommended precautions that must be understood and adhered to during the installation, operation, and maintenance of these electrically operated appliances.

WARNING:

Do not get water on wiring in controls. Be sure to wash inside of skillet pan, inside of cover including under drip-lip, and pouring spout area.

CAUTION: Do not install in such a manner that the service person cannot remove the control box cover.

Supply wires must be suitable for temperature of at least 90°C. Additionally, all wiring must conform to the requirements of local and national electric codes. Conduit and fittings should be watertight type.

Unit is equipped with an interlock switch that shuts off gas to the burners when skillet pan is more than 10° above normal horizontal cooking position.

SECTION 1 GENERAL INFORMATION

G

UniVerse GAS TILTING SKILLET

JOB NAME: _____
ITEM NO.: _____
NO. REQUIRED: _____

MODELS: 30-STGL, 30-STGL-LX, 40-STGL, 40-STGL-LX, Open-Leg Gas UniVerse Skillet
30-STGM, 30-STGM-LX, 40-STGM, 40-STGM-LX, Modular Gas UniVerse Skillet

MODELS:
m 40-STGM
m 30-STGM
m 40-STGL
m 30-STGL

DESCRIPTION:

The Market Forge Gas UniVerse Tilting Skillets™ are available in 30-gallon (87-liter) and 40-gallon (114-liter) pan bodies with 108,750 BTU and 145,000 BTU inputs, respectively. Both models are available in open-leg and closed-base frame assemblies with manual or power tilt capabilities.

Benefits: Our UniVerse Skillets, unlike those of other braising pan manufacturers that use clad plates, incorporate a uni-pan design. This design reduces the potential for leaks and eliminates the possibility of pitting and surface rusting. The new center-of-gravity tilting allows for safe use of caster mounting. Our new power tilt operates smoothly, with manual override that works easily when needed, without the use of electric drills required by other manufacturers.

Construction: The UniVerse Skillet has a textured stainless steel cooking surface with reinforcement. Heating elements turn off automatically when the cooking pan is raised to a tilted position. The skillet is provided with a heavy-duty gas shock assisted cover with condensate vent.

The cooking pan and cover are mounted to a 11/2" (38 mm) square stainless steel tube frame, permitting access to floor for easy cleaning. The closed-base model incorporates easily removable stainless steel panels on the front and left sides. The cooking pan tilts to a full 93°. This is accomplished by a gear mechanism operated manually with a collapsible hand crank. Power tilting is also available. Both tilting methods allow complete emptying of contents under positive control.

TECHNICAL SPECIFICATIONS:

Cooking Pan: The unitized cooking pan has no bottom welds and is reinforced to resist cracking as expansion and contraction occur. The textured cooking surface is machine-applied for a long-wearing, good appearance. The cooking pan incorporates an easy-pour lip and 5-gallon increment markings. Gas flames are applied to finned aluminum extrusions bolted to the underside of the cooking pan for better heat transfer. An interlock switch is provided



30 - STGM Shown

Controls: The UniVerse Tilting Skillet™ comes standard with a solid-state temperature controller with a positive off position and 100°–450° Fahrenheit scale, a pilot light to indicate when the gas burners are on, and a 1-hour mechanical timer. Optional power tilting mechanism also utilizes an up/down rocker switch. Manual tilting mechanism uses a collapsible hand crank located below the control panel. A high-limit temperature control is also provided. The control housing shall be water resistant/splash-proof.

Operation: The UniVerse Tilting Skillet™ Models 40-STGM and 40-STGL will be rated at 145,000 BTU at 4" W.C. natural gas and 10" W.C. propane gas. Models 30-STGM and 30-STGL will be rated at 108,750 BTU at 4" W.C. natural gas and 10" W.C. propane gas.

OPTIONS: (Optional at Extra Cost:)

- m Power tilt mechanism
- m Pan support
- m Removable liquid strainer
- m 12" x 20" (305 mm x 508 mm) pan holder inserts (pan not included)
- m 1 1/2" Tangent draw-off valve
- m Single & Double Faucet
- m Single & Double pantry hose
- m Caster kit
- m Strainer relief kit
- m 480 Volt

The manufacturer reserves the right to modify materials and specifications without notice



Printed in U.S.A.



MARKET FORGE
INDUSTRIES INC.
An Employee Owned Company

Spec No. S-2446D
01/03

FOOD SERVICE EQUIPMENT
UniVerse Skillet

SECTION 1 GENERAL INFORMATION

G

UniVerse GAS TILTING SKILLET

DETAILS & DIMENSION

MODELS: 30-STGL, 30-STGL-LX, 40-STGL, 40-STGL-LX, Open-Leg Gas UniVerse Skillet
30-STGM, 30-STGM-LX, 40-STGM, 40-STGM-LX, Modular Gas UniVerse Skillet

EC = Electrical control circuit connection
G = Gas
HW = Hot water
CW = Cold water

DIMENSIONS AND CAPACITY:

Skillet Pan Internal Dimensions:

•Models 40-STGM and 40-STGL:
42.25" (1073 mm) Wide x 9" (228 mm) Deep x 25.75"
(654 mm) Front-to- Back.

•Models 30-STGM and 30" STGL:
30.25" (768 mm) Wide x 9" (228 mm) Deep x 25.75"
(654 mm) Front-to-Back.
Skillet Pan Capacity:

•Models 40-STGM and 40-STGL:
40 gallons (152 liters)

•Models 30-STGM and 30-STGL:
30 gallons (114 liters)

ELECTRICAL & GAS CHARACTERISTICS:

Control Circuit: 120V AC, 60 Hz, 1-phase, 1/2" (13 mm)
conduit, 6 amps max. If the equipment is to be installed
where the elevation exceeds 2,000 feet (609.9 meters)
above sea level, specify installation altitude so that proper

gas orifices can be provided. Allow 2" at rear and 0" at
sides if adjacent walls are combustible. May be installed on
combustible floor.

Gas connection: 3/4- (19 mm) NPT

Manifold Gas Pressure and Inputs:

| | | 40-STGM | 30-STGM |
|------------------------------|------|---------|---------|
| | | 40-STGL | 30-STGL |
| | W.C. | BTU | BTU |
| • Natural standing pilot | 4" | 145,000 | 108,750 |
| • Propane standing pilot | 10" | 145,000 | 108,750 |
| • Natural pilotless ignition | 4" | 145,000 | 108,750 |
| • Propane pilotless ignition | 10" | 145,000 | 108,750 |

Incoming gas pressure must not exceed 14" (357 mm)
W.C.

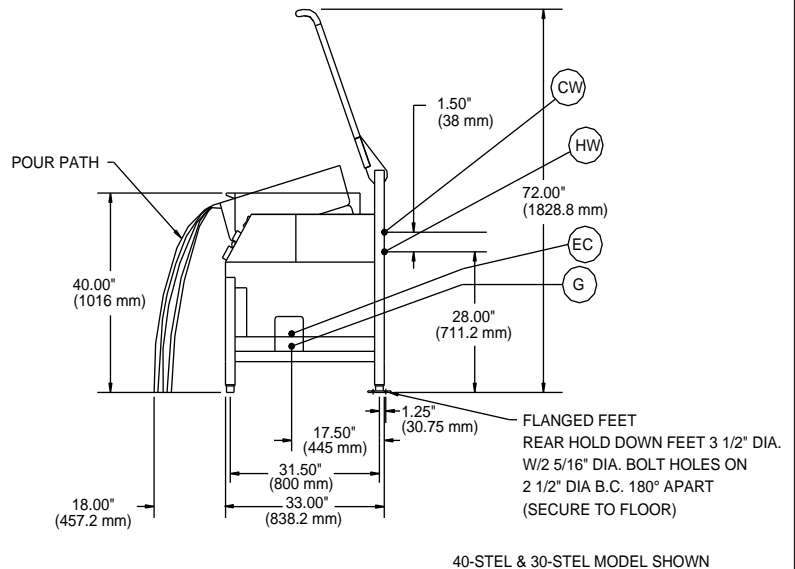
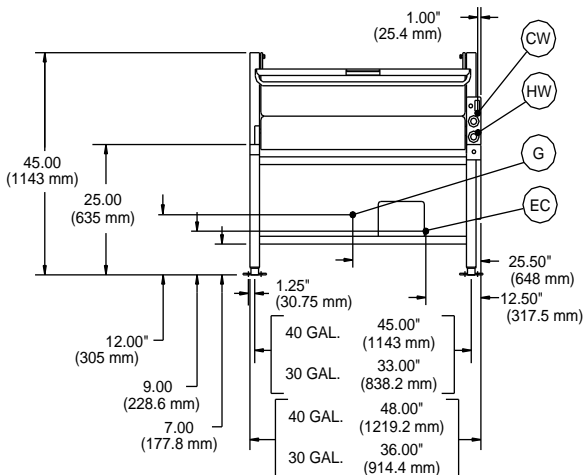
WATER CONNECTIONS:

Cold Water: 3/8" NPT to cold water faucet

Hot Water: 3/8" NPT to hot water faucet

Water Pressure Requirements: 50 PSI (3.5 kg/cm²)
max.; 25 PSI (1.8 kg/cm²) min.

Water connections are optional when required.



*It is our policy to build equipment which is design certified by U.L., A.S.M.E., N.S.F. and C.S.A. However, a continuing program of product improvement makes it necessary to submit new models to the agencies as they are developed and consequently not all models bear the appropriate agency labels at all times.

Spec No. S-2446D
01/03

FOOD SERVICE EQUIPMENT
UniVerse Skillet



Printed in U.S.A.



MARKET FORGE
INDUSTRIES INC.
An Employee Owned Company

SECTION 2 INSTALLATION INSTRUCTIONS

MODELS: 30-STGL, 30-STGM, 40-STGL, 40-STGM, Gas Standing Pilot 30-STGM-LX, 30-STGL-LX, 40-STGM-LX, 40-STGL-LX, Gas Standing Pilot with Power Tilt

GENERAL INSTALLATION

1. Remove carton from skid, being careful not to dent or scratch finished surfaces of unit.
2. Inspect unit carefully for shipping damage. File claim with carrier immediately if damage is found.
3. Remove screws holding unit to skid.
4. Transfer unit to desired position and make level and steady by adjusting feet to compensate for floor irregularities. Bolt the flange feet to floor.
5. Raise skillet cover to full open position. Raise skillet by turning handcrank clockwise. Check to make sure burners and carry-over tube are in position and securely seated.
6. Lower skillet by turning handcrank counterclockwise until fully seated on frame. Skillet is equipped with interlock switch, which does not permit burners to ignite until skillet is lowered to less than 10° off normal horizontal cooking position.

Note: "LX" models may be raised or lowered using tilt switch after connecting to electrical supply.

7. Gas service connections:

- a. This unit is factory-adjusted for gas consumption of 180,750 BTU/Hr. (on 30-gallon unit) or 145,000 BTU/ Hr. (on 40-gallon unit) at the pressure indicated. Please read the rating plate on top of control box. If this plate is marked for a different gas than that supplied, notify your dealer immediately.

DO NOT CONNECT GAS LINES. Only a qualified installer or service man should make the installation.

- b. Use new 3/4 I.P.S. iron or steel pipe complying with ANSI Standard for Wrought-Steel and Wrought-Iron

Pipe B36—latest edition, properly threaded, reamed, and free from chips, oil, and dirt.

If pipe dope is used, apply a moderate amount, leaving two end threads bare. Connect the gas line into bottom (inlet) side of shutoff valve with a union and make accessible to the operator.

- c. Natural gas units are equipped with a pressure regulator factory-adjusted to give 4" (102 mm) water column manifold pressure. The supply pressure must be at least 5" (127 mm) water column pressure.
- d. Propane gas units are equipped with a pressure regulator factory-adjusted to give 10" (254 mm) water column manifold pressure. The supply pressure must be at least 11" (279 mm) water column pressure.
- e. Maximum supply pressure must not exceed 1/2 psig (3.45 k/PA) for both natural and propane gas.
- f. Perform a gas leak test of all newly-made joints, as well as those leading to the main gas control valve and pilot burner, using a soap solution. Do not use flame.

8. Electrical service connection:

Connect skillet controls to 110/120 volt AC, 60 Hz, single-phase branch circuit rated 15 amps capacity. Wiring will conform to the requirements of national and local electrical codes (220 volts, 50 Hz, single-phase for export units). Only a licensed electrician should make electrical connection.

INSTALLATION WITH CASTERS

1. Installation shall be made with a connector that compiles with the Standard for Connectors for Moveable Gas Appliances, CAN/CGA-6.16, and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.41 or the Standard for Quick-Disconnect Devices for Use with Gas Fuel, CAN-6.9
2. Adequate means must be provided to limit the movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit the appliance movement.
3. The location(s) where the restraining means may be attached to the appliance shall be specified.

LIGHTING INSTRUCTIONS FOR TILTING SKILLER PILOT AND BURNERS

1. Turn the thermostat to off position.
2. Raise the skillet all the way up for access to pilot and gas control.
3. Depress and turn control gas cock dial to off position.
4. Wait 5 minutes to allow gas that may have accumulated in the main burner compartment to escape.

LIGHT PILOT AS FOLLOWS:

1. Turn gas cock dial to pilot position.
2. Depress gas cock dial and light pilot; with pilot burning, hold gas cock dial depressed for approximately a half minute before releasing.

Note: If pilot does not remain lighted, repeat Step 2, allowing a longer period of time before releasing gas cock dial. (Adjust pilot flame if necessary.)

SHUTDOWN INSTRUCTIONS

1. Turn the thermostat to off position.
2. Raise skillet all the way up for access to gas control.
3. Depress and turn control gas cock dial to off position.
4. Lower skillet to normal horizontal cooking position.

SECTION 2 INSTALLATION INSTRUCTIONS

CAUTION: BE SURE TO READ

- Keep this appliance area free and clear of combustibles.
- Do not obstruct the flow of combustion and ventilation air.
- Allow adequate ventilation to unit. Install under exhaust hood.
- Keep this manual for future reference.
- This installation must conform with local codes or, in the absence of local codes, with National Fuel Gas code, ANSI Z223.1—latest edition; or the Natural Gas Installation Code, CAN/CGA—B149.1; or the Propane Installation Code, CAN/CGA—B149.2, as applicable.
- The griddle and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressure in excess of 1/2 psig (3.45 k/PA).
- The griddle must be isolated from the gas supply system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2" psig (3.45 k/PA).
- This unit is serviceable from the front. Do not install in such a manner that a service person cannot remove front panels if provided.
- When installed, this appliance must be electrically grounded in accordance with local codes, or, in the absence of local codes, with the National Electric Code, ANSI/NFPA No. 70—latest edition.
- In Canada, this installation must conform to C.S.A. Standard C22.1 Canadian Electrical Code, Part 1.
- The wiring diagram adhesive label is located on the inside of the control box cover.
- The product must be installed in a room with adequate air supply for complete gas combustion.
- Do not place on or directly against the unit any objects that would block air openings into the combustion chamber.
- Suitable for use on combustible floors.
- Clearances from both combustible and noncombustible construction are 0" (0 mm) from side walls, 2" (51 mm) from rear wall.
- This unit does not have a flexible cord wired into electrical system.

MODELS: 30-STGL-4, 30-STGM-4, 40-STGL-4, 40-STGM-4, Gas Pilotless Ignition 30-STGM-4LX, 30-STGL-4LX, 40-STGM-4LX, 40-STGL-4LX, Gas Pilotless Ignition with Power Tilt

UNIVERSE TILTING SKILLET WITH PILOTLESS IGNITION

GENERAL INSTALLATION

1. Remove carton from skid, being careful not to dent or scratch finished surfaces of unit.
2. Inspect unit carefully for shipping damage. File claim with carrier immediately if damage is found.
3. Remove screws holding unit to skid.
4. Transfer unit to desired position and make level and steady by adjusting feet to compensate for floor irregularities. Bolt the flange feet to floor.
5. Raise skillet cover to full open position. Raise skillet by turning handcrank clockwise. Check to make sure burners and carry-over tube are in position and securely seated.
6. Lower skillet by turning handcrank counterclockwise until fully seated on frame. Skillet is equipped with interlock switch, which does not permit burners to ignite until skillet is lowered to less than 10° off normal horizontal cooking position.

Note: "LX" models may be raised or lowered using tilt switch after connecting to electrical supply.

7. Gas service connections:

- a. This unit is factory-adjusted for gas consumption of 180,750 BTU/Hr. (on 30-gallon unit) or 145,000 BTU/ Hr. (on 40-

gallon unit) at the pressure indicated. Please read the rating plate on top of control box. If this plate is marked for a different gas than that supplied, notify your dealer immediately.

DO NOT CONNECT GAS LINES. Only a qualified installer or service man should make the installation.

- b. Use new 3/4 I.P.S. iron or steel pipe complying with ANSI Standard for Wrought-Steel and Wrought-Iron

Pipe B36—latest edition, properly threaded, reamed, and free from chips, oil, and dirt.

If pipe dope is used, apply a moderate amount, leaving two end threads bare. Connect the gas line into bottom (inlet) side of shutoff valve with a union and make accessible to the operator.

- c. Natural gas units are equipped with a pressure regulator factory-adjusted to give 4" (102 mm) water column manifold pressure. The supply pressure must be at least 5" (127 mm) water column pressure.
- d. Propane gas units are equipped with a pressure regulator factory-adjusted to give 10" (254 mm) water column manifold pressure. The supply pressure must be at least 11" (279 mm) water column pressure.
- e. Maximum supply pressure must not exceed 1/2 psig (3.45 k/PA) for both natural and propane gas.
- f. Perform a gas leak test of all newly-made joints, as well as those leading to the main gas control valve and pilot burner, using a soap solution. Do not use flame.

SECTION 2 INSTALLATION INSTRUCTIONS

8. Electrical service connection:

Connect skillet controls to 110/120 volt AC, 60 Hz, single-phase branch circuit rated 15 amps capacity. Wiring will conform to the requirements of national and local electrical codes (220 volts, 50 Hz, single-phase for export units). Only a licensed electrician should make electrical connection.

INSTALLATION WITH CASTERS

1. Installation shall be made with a connector that compiles with the Standard for Connectors for Moveable Gas Appliances, CAN/CGA-6.16, and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.41 or the Standard for Quick-Disconnect Devices for Use with Gas Fuel, CAN-6.9
2. Adequate means must be provided to limit the movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit the appliance movement.
3. The location(s) where the restraining means may be attached to the appliance shall be specified.

LIGHTING INSTRUCTIONS FOR TILTING SKILLERS GLOW COIL

1. Turn the thermostat counterclockwise to off position.
2. Wait 5 minutes to allow gas that may have accumulated in the main burner compartment to escape.
3. Turn thermostat to desired temperature position.

Note: Gas will ignite approximately 40 seconds after thermostat is set at desired temperature.

SHUTDOWN INSTRUCTIONS

Turn the thermostat counterclockwise to off position.

PROLONGED SHUTDOWN

Prolonged Shutdown

1. Turn the thermostat counterclockwise to off position.
2. Turn gas valve located on bottom right rear to off position.

CAUTION: BE SURE TO READ

- Keep this appliance area free and clear of combustibles.
- Do not obstruct the flow of combustion and ventilation air.
- Allow adequate ventilation to unit. Install under exhaust hood.
- Keep this manual for future reference.
- This installation must conform with local codes or, in the absence of local codes, with National Fuel Gas code, ANSI Z223.1—latest edition; or the Natural Gas Installation Code, CAN/CGA—B149.1; or the Propane Installation Code, CAN/CGA—B149.2, as applicable.
- The griddle and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressure in excess of 1/2 psig (3.45 k/PA).
- The griddle must be isolated from the gas supply system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2" psig (3.45 k/PA).
- When installed, this appliance must be electrically grounded in accordance with local codes, or, in the absence of local codes, with the National Electric Code, ANSI/NFPA No. 70—latest edition.
- In Canada, this installation must conform to C.S.A. Standard C22.1 Canadian Electrical Code, Part 1.
- The wiring diagram adhesive label is located on the inside of the control box cover.
- The product must be installed in a room with adequate air supply.
- Do not place on or directly against the unit any objects that would block air openings into the combustion chamber.
- Suitable for use on combustible floors.
- Clearances from both combustible and noncombustible construction are 0" (0 mm) from side walls, 2" (51 mm) from rear wall.
- This unit is serviceable from the front. Do not install in such a manner that a service person cannot remove front panels if provided.
- This unit does not have a flexible cord wired into electrical system.

SECTION 2 INSTALLATION INSTRUCTIONS

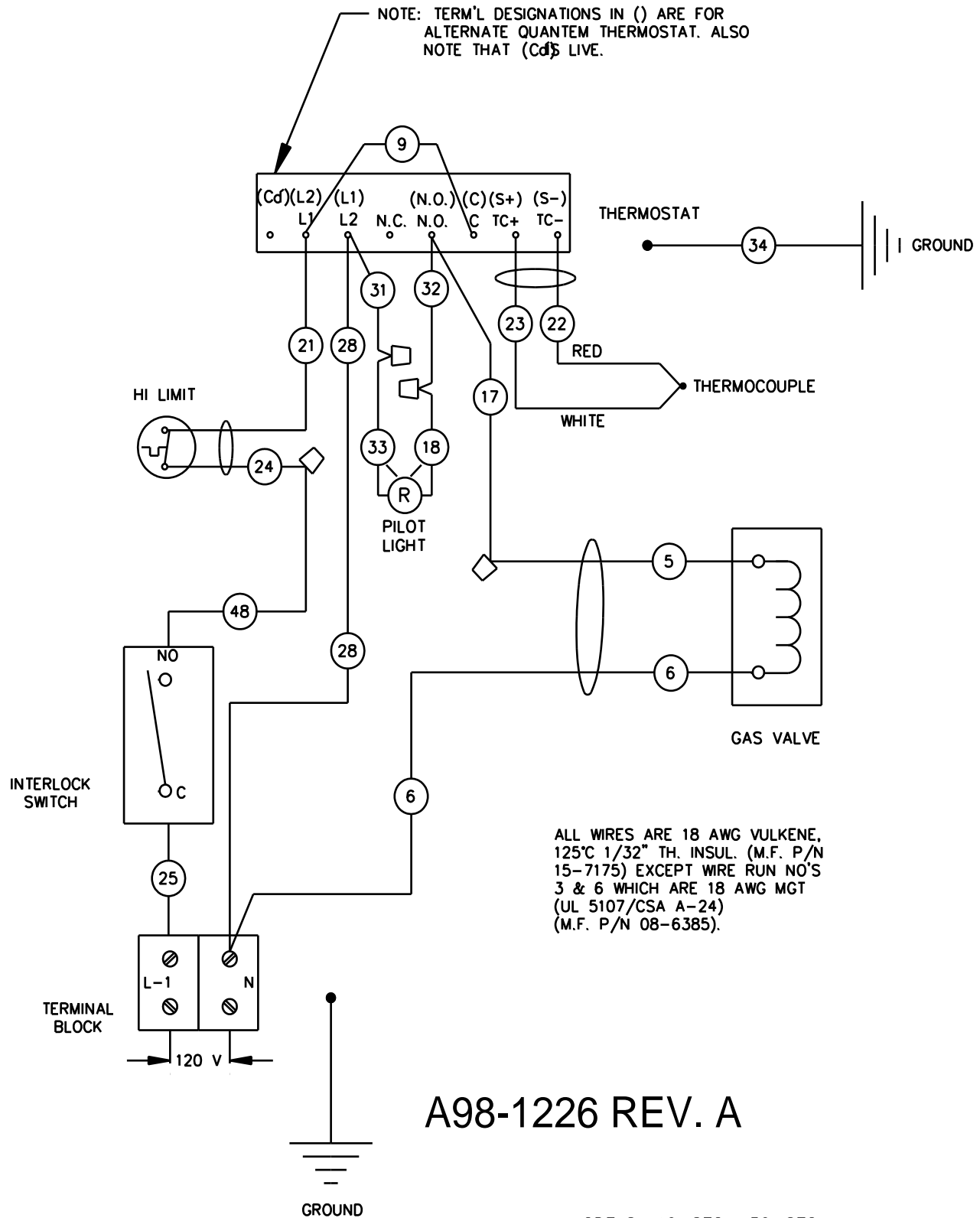


Figure 2-1 Wiring Diagram, Manual Tilt Standing Pilot Units

SECTION 2 INSTALLATION INSTRUCTIONS

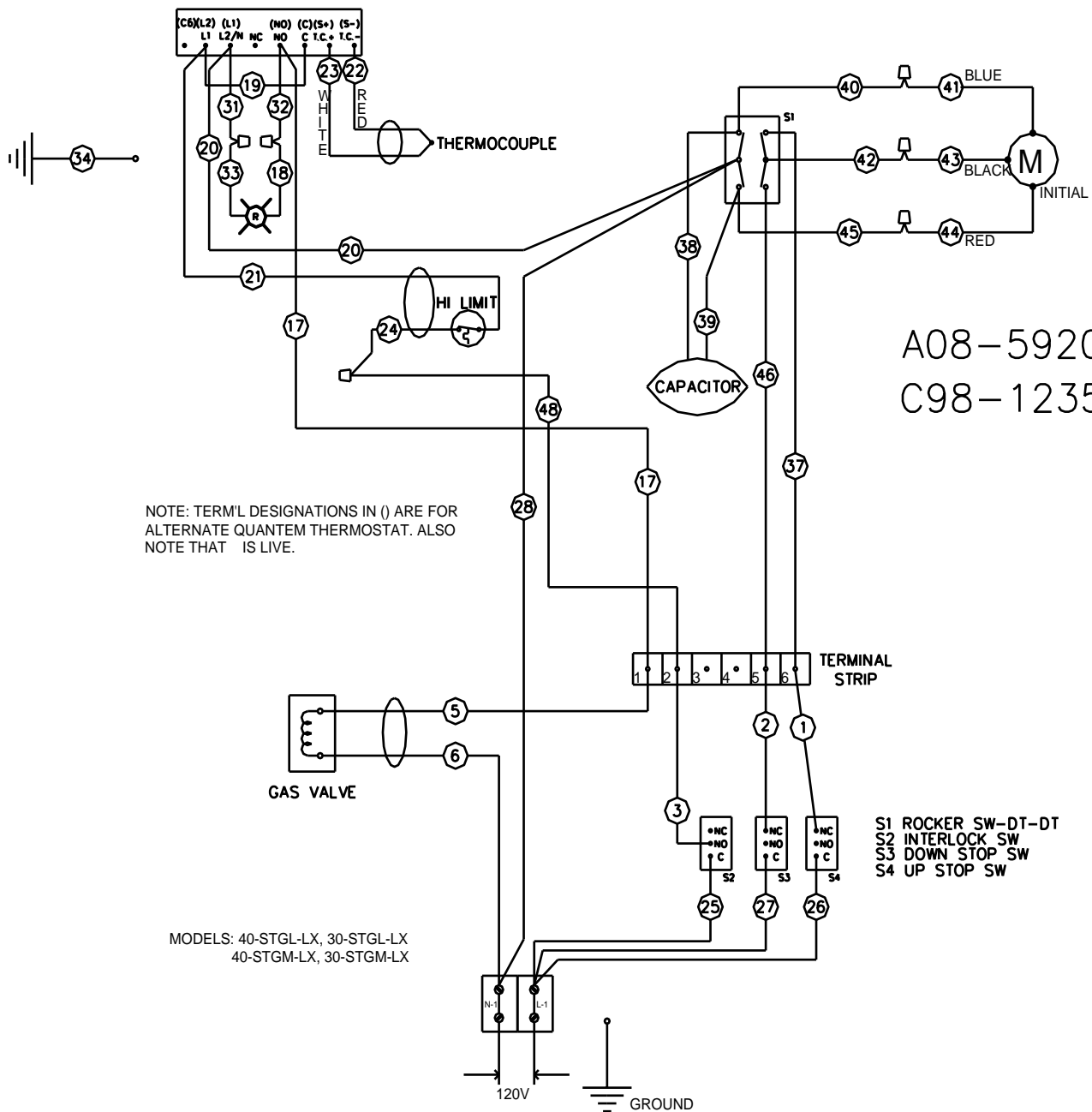


Figure 2-2 Wiring Diagram, Power Lift Standing Pilot Units

SECTION 2 INSTALLATION INSTRUCTIONS

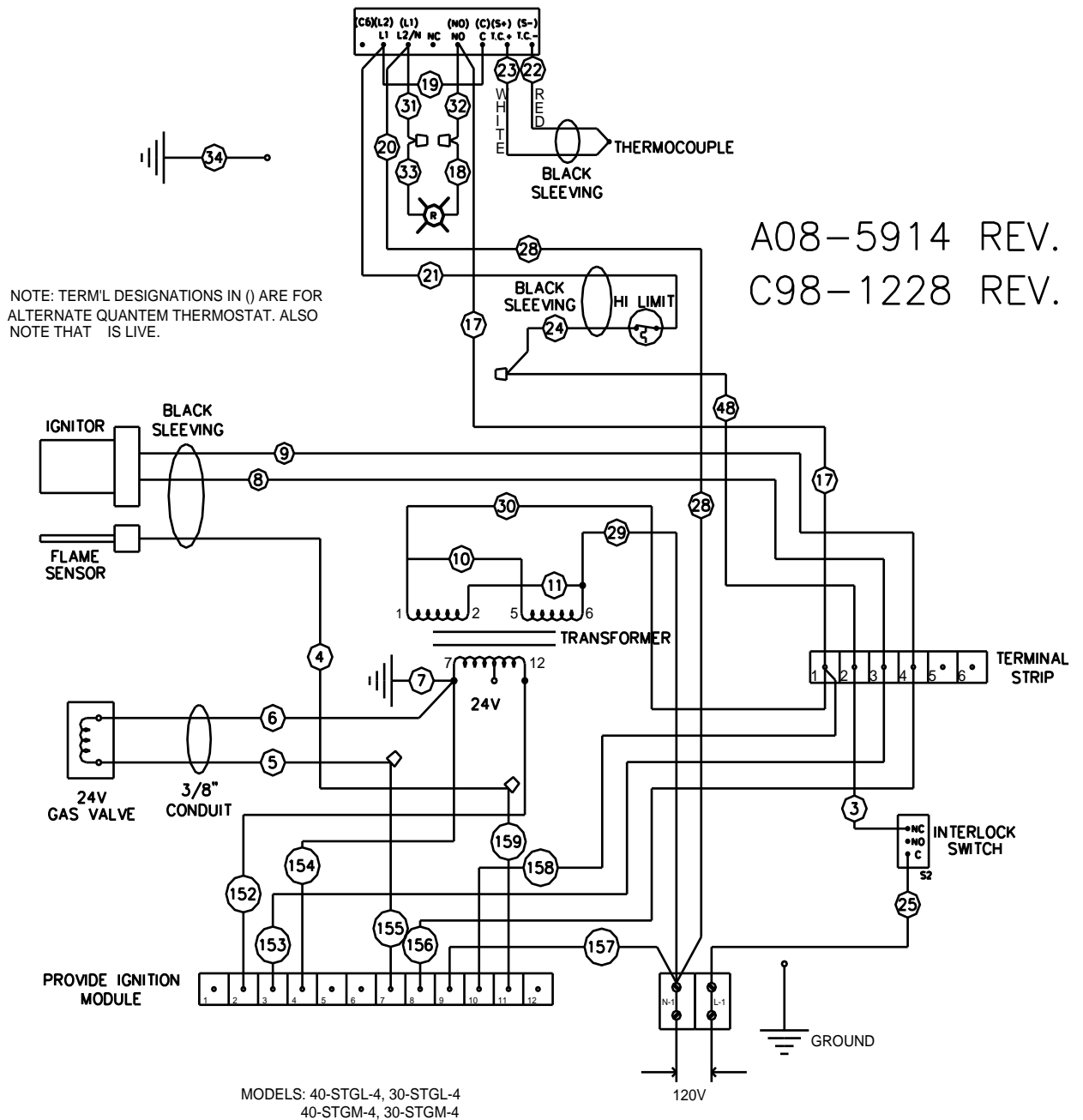


Figure 2-3 Wiring Diagram, Manual Tilt Carborundum Units

SECTION 2 INSTALLATION INSTRUCTIONS

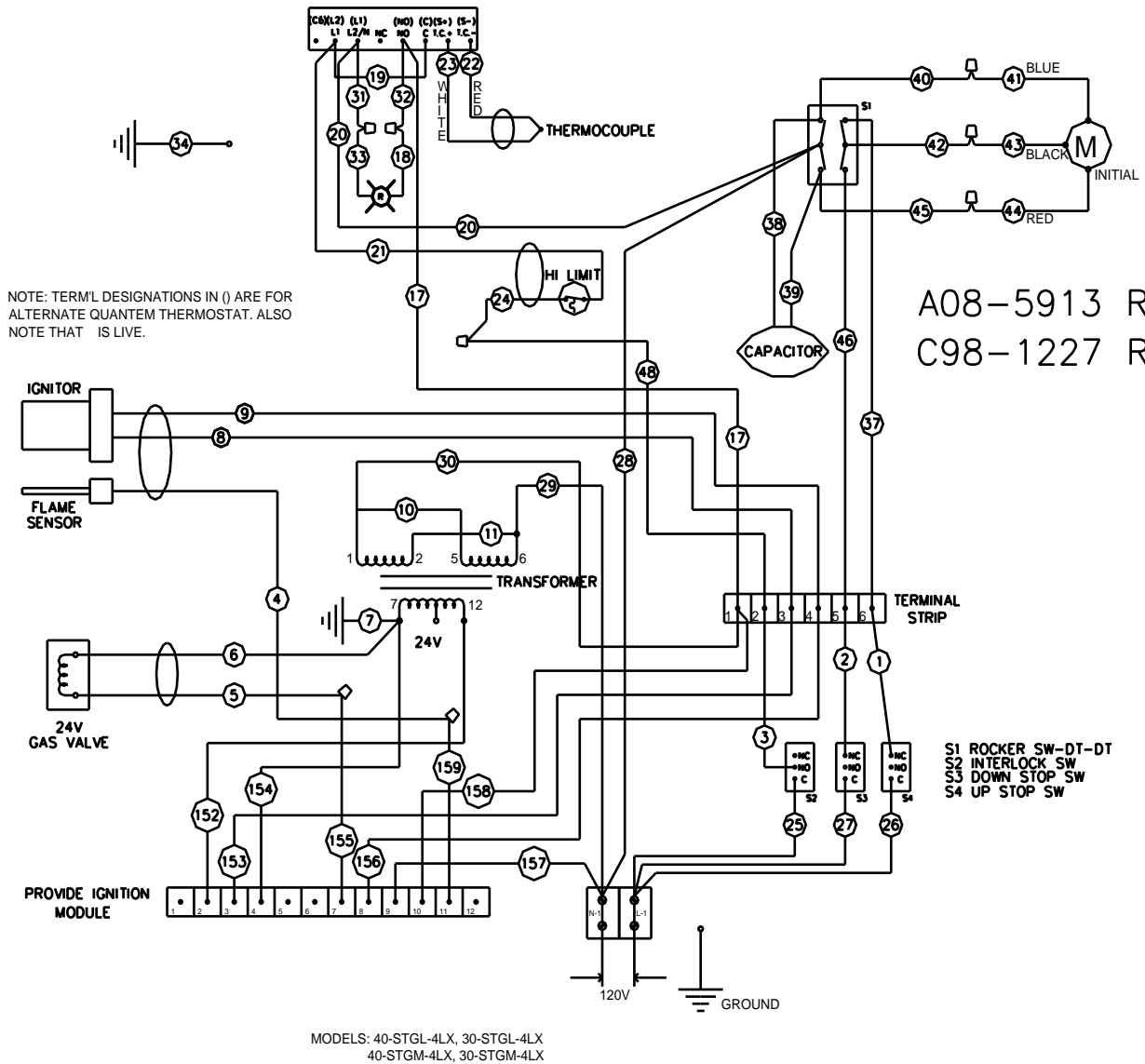


Figure 2-4 Wiring Diagram, Power Tilt Carborundum Units

SECTION 3 OPERATING INSTRUCTIONS

UNIVERSE TILTING SKILLET

**MODELS: 30-STGL, 30-STGL-LX, 40-STGL, 40-STGL-LX, Open-Leg Gas UniVerse Skillet
30-STGM, 30-STGM-LX, 40-STGM, 40-STGM-LX, Modular Gas UniVerse Skillet**

INTRODUCTION

This technical manual contains general information, installation, operation, principles of operation, troubleshooting guide, and maintenance information for the UniVerse Tilting Skillet. Also included is an illustrated parts list and a directory of authorized parts and service agencies.

DESCRIPTION

The Market Forge Industries UniVerse Models 30-STGL (108,750 Btu input) and 40-STGL (145,00 Btu input) are elec-

trically operated skillets, tilting type, with 30- and 40-gallon capacities, respectively. They are equipped with a solid state thermostat and high-limit control with a 100°F-to-450°F temperature scale.

BASIC FUNCTIONS

The UniVerse Tilting Skillet is a very versatile cooking appliance. It can perform basic cooking functions, such as braising meat, sautéing, pan-frying chicken, steaming vegetables, boiling, and simmering. Refer to Section 4—Test Kitchen Bulletin, which gives detailed information on the various types of food products that can be cooked in the skillet.

OPERATION OF UNIVERSE TILTING SKILLET WITH PILOT

**MODELS: 30-STGL, 30-STGM, 40-STGL, 40-STGM, Gas Standing Pilot
30-STGM-LX, 30-STGL-LX, 40-STGM-LX, 40-STGL-LX, Gas Standing Pilot with Power Tilt**

1. Check to see that the correct gas connection has been made to the unit, the electric 110/120-volt connection has been made, and the pilot has been lighted. (Instructions for lighting pilot are on a plate on control box.) Ref. Section 2.
2. Be sure skillet has been or is cleaned before using.
3. Turn main gas cock to on.
4. Be certain skillet is lowered to the normal horizontal cooking position (or as much as 10° above) so burners will light.
5. Set the thermostat to the desired temperature. See Section 4—Test Kitchen Bulletin for thermostat settings.
6. Preheat to desired setting before grilling, pan frying, or any other type of cooking except boiling.

Note: For best results, allow unit to cycle ON/OFF once.

7. Cover should be up for most types of cooking, except simmering or boiling. The cover has a lip at the rear that will direct condensate into the skillet rather than onto the cabinet base.
8. When food is cooked, it should be immediately removed from skillet to prevent overcooking.
9. To lower skillet, merely turn tilt skillet handcrank counterclockwise. To raise skillet, turn handcrank clockwise.

Note: "LX" models are raised and lowered using switch on front of control box.

10. For cleaning instructions, see Section 6—Troubleshooting and Maintenance.

CAUTION: BE SURE TO READ

- Disconnect the power supply to skillet before cleaning or servicing. (Note: "LX" models should have the skillet raised to washing position before disconnecting power supply.)
- Keep this appliance area free and clear of combustibles.
- Do not obstruct the flow of combustion and ventilation air.
- If skillet pan is difficult to raise, the lift gears may need to be lubricated. The gears are located on the right side under the control box. Apply a liberal amount of grease along the helical thread of the worm where it engages the worm gear. Use multi-purpose, NLGI #2 lithium-based, water-resistant grease.
- Keep this manual for future reference.
- Consult the factory, the factory representative, or a local service company to perform maintenance and repairs.
- In the event of a power failure, do not operate appliance.
- Periodically examine the flue outlet located behind the skillet cover for any obstructions.
- Appliances with casters are always to be restrained from movement. If removal of the restraint is necessary, always reconnect the restraint when the appliance is returned to its originally installed position.

SECTION 3 OPERATING INSTRUCTIONS

OPERATION OF UNIVERSE TILTING SKILLET WITH PILOTLESS IGNITION

**MODELS: 30-STGL-4, 30-STGM-4, 40-STGL-4, 40-STGM-4, Gas Pilotless Ignition
30-STGM-4LX, 30-STGL-4LX, 40-STGM-4LX, 40-STGL-4LX, Gas Pilotless Ignition with Power Tilt**

1. Check to see that the correct gas connection has been made to the unit, the electric 110/120-volt connection has been made, and the pilot has been lighted. (Instructions for lighting pilot are on a plate on control box.) Ref. Section 2.
 2. Be sure skillet has been or is cleaned before using.
 3. Be certain skillet is lowered to the normal horizontal cooking position (or as much as 10° above) so burners will light.
 4. Set the thermostat to the desired temperature. See Section 4—Test Kitchen Bulletin for thermostat settings.
 5. Preheat to desired setting before grilling, pan frying, or any other type of cooking except boiling.
 6. Cover should be up for most types of cooking, except simmering or boiling. The cover has a lip at the rear that will direct condensate into the skillet rather than onto the cabinet base.
 7. When food is cooked, it should be immediately removed from skillet to prevent overcooking.
 8. To lower skillet, merely turn tilt skillet handcrank counterclockwise. To raise skillet, turn handcrank clockwise.
- Note:** “LX” models are raised and lowered using switch on front of control box.
- Note:** For best results, allow unit to cycle ON/OFF once.
9. For cleaning instructions, see Section 6—Troubleshooting and Maintenance.

CAUTION: BE SURE TO READ

- Disconnect the power supply to skillet before cleaning or servicing. (Note: “LX” models should have the skillet raised to washing position before disconnecting power supply.)
- Keep this appliance area free and clear of combustibles.
- Do not obstruct the flow of combustion and ventilation air.
- If skillet pan is difficult to raise, the lift gears may need to be lubricated. The gears are located on the right side under the control box. Apply a liberal amount of grease along the helical thread of the worm where it engages the worm gear. Use multi-purpose, NLGI #2 lithium-based, water-resistant grease.
- Keep this manual for future reference.
- Consult the factory, the factory representative, or a local service company to perform maintenance and repairs.
- In the event of a power failure, do not operate appliance.
- Periodically examine the flue outlet located behind the skillet cover for any obstructions.
- Appliances with casters are always to be restrained from movement. If removal of the restraint is necessary, always reconnect the restraint when the appliance is returned to its originally installed position.

SECTION 4 TEST KITCHEN BULLETIN

UNIVERSE TILTING SKILLET

**MODELS: 30-STGL, 30-STGL-LX, 40-STGL, 40-STGL-LX, Open-Leg Gas UniVerse Skillet
30-STGM, 30-STGM-LX, 40-STGM, 40-STGM-LX, Modular Gas UniVerse Skillet**

COOKING FACTS ON PARADE

1. The UniVerse Skillet is one of the most versatile pieces of equipment to be found in any restaurant or institutional kitchen.
2. This unit will stew, simmer, pan-fry, braise, grill, and sauté—and all with a very uniform heat pattern.

Note: *DO NOT ATTEMPT TO DEEP FRY WITH YOUR SKILLET!*

3. For best results, the Tilting Skillet should always be preheated and allowed to cycle once.
4. A great deal of heavy lifting and transferring of foods from one pan to another can be eliminated, and, therefore, pot washing will be reduced.
5. This type of equipment usually reduces the total cooking time by as much as 25% on combination dishes.
6. Sauces usually lose less moisture, as the cover reduces evaporation.
7. Large batches of gourmet items can be prepared with less work and with more uniform results.
8. Frozen vegetables can be cooked in the UniVerse Skillet in the serving pan, then removed and transferred directly to the serving line.
9. The following temperatures should be used:

| | |
|------------|-------------------|
| Simmering: | Maximum of 200 °F |
| Saut éing: | 225 –275°F |
| Searing: | 300 –350°F |
| Frying: | 325 –375°F |
| Grilling: | 350-425° |

10. Temperatures of approximately 200°F should always be used for milk-based products, or scorching will take place. Lower temperatures (150–175°F) prevent thickening.
11. Some items should be started at a high temperature and then reduced. This permits sealing for about 20% of the time and cooking for the remaining 80%.
12. The cover has a lip at the back edge that directs the condensate on the cover back into the skillet.
13. The unit tilts easily to 90°, and receiving pan is always approximately 2 inches from the pouring lip of the skillet.
14. The stainless steel UniVerse Skillet is rapidly cleaned with a mild detergent. Water, waste, and scraps are easily removed into the receiving pan for disposal. (It is always recommended that this type of unit be presoaked if possible.)
15. Breakfast foods such as sausage, bacon, pancakes, fried eggs, scrambled eggs, and French toast are a few of the more common items that can be cooked in the UniVerse Skillet.
16. When cooking meat or poultry, all pieces should be of fairly uniform size and weight and should be turned at least once while simmering.
17. This unit can be converted to a proof box by placing a small amount of water in the pan to form steam and then placing the food in another pan. The thermostat should be set very low (100–150°F).
18. The unit can also be used as a holding cabinet by adding water and setting the thermostat at approximately 175°F.
19. When using water over and over for vegetable cookery, be sure to add water occasionally to keep level at about 3–4 inches. Thermostat should be set at 250°F.
20. Perforated 21/2"-deep pans are suggested for vegetables for the most satisfactory results. The pan can then be removed easily and transferred to the serving line.

SECTION 4 TEST KITCHEN BULLETIN

TABLE 4.1
COOKING PORTIONS AND TIMES

UNIVERSE SKILLET ALL MODULAR & TUBULAR LEG MODELS

The UniVerse Skillet is one of the most versatile pieces of equipment to be found in any restaurant or institutional kitchen. It enables the cook to stew, simmer, pan-fry, braise, grill, or sauté, and all with a very uniform heat pattern. The figures given below are suggested quantities and temperature settings and estimated numbers of orders per load and per hour. When two temperatures are given, the first is to start the product, the second to finish the product.

| ITEM | PORTION SIZE | THERMOSTAT SETTING | | BATCHES PER HOUR | 30 GALLON PER LOAD | | 40 GALLON PER LOAD | |
|-------------------------|-----------------|-----------------------|------|---------------------|-----------------------|-------|-----------------------|-------|
| | | | | | QTY. | YIELD | QTY. | YIELD |
| BREAKFAST FOODS | | | | | | | | |
| Bacon | 3 slices | 350° | | 12 | 2# | 10 | 3# | 15 |
| Eggs | | | | | | | | |
| Boiled-Hard | 1 egg | 225° | | 5 | 50 | 50 | 75 | 75 |
| Boiled-Soft | 1 egg | 225° | | 8 | 50 | 50 | 75 | 75 |
| Fried | 1 egg | 400° | | 4 | 30 | 30 | 45 | 45 |
| Poached | 1 egg | 225° | | 5 | 36 | 36 | 60 | 60 |
| Scrambled | 1 1/2 eggs | 300° | 200° | 1 | 18 gallon | 720 | 28 gallon | 1100 |
| French Toast | 3 slices | 450° | | 7 | 35 slices | 12 | 50 slices | 17 |
| Regular Oatmeal | 1/2 cup | 250° | | 2 | 20# | 500 | 40# | 1000 |
| Pancakes | 2 each | 400° | | 10 | 30 each | 15 | 50 each | 25 |
| FISH | | | | | | | | |
| Clams | 1 pt. | 400° | | 10 | 10 qts. | 20 | 15 qts. | 30 |
| Fish Cakes | 2 oz. | 400° | | 5 | 70-3 oz. | 35 | 110-3 oz. | 55 |
| Haddock Filet | 4 oz. | 400° | | 4 | 60-4 oz. | 60 | 90-4 oz. | 90 |
| Halibut Steak | 5 oz. | 450° | | 3 | 60-4 oz. | 60 | 90-4 oz. | 90 |
| Lobster | 1-1# | 350° | | 4 | 20-1# | 20 | 30-1# | 30 |
| Swordfish | 5 oz. | 450° | | 3 | 50-5 oz. | 50 | 75-5 oz. | 75 |
| SAUCES, GRAVIES & SOUPS | | | | | | | | |
| Brown Gravy | 1 oz. | 350° | 200° | 2 | 18 gallons | 2300 | 35 gallons | 4500 |
| Cream Sauces | 2 oz. | 250° | 175° | 1 | 18 gallons | 1150 | 35 gallons | 2250 |
| Cream Soup | 6 oz. | 200° | | 1 | 18 gallons | 375 | 35 gallons | 725 |
| French Onion Soup | 6 oz. | 225° | | 1 | 18 gallons | 350 | 35 gallons | 700 |
| Meat Sauce | 4 oz. | 350° | 200° | 1 | 18 gallons | 575 | 35 gallons | 1100 |
| MISCELLANEOUS | | | | | | | | |
| Grilled Cheese | 1 sand | 400° | | 8 | 35 sand | 35 | 50 sand | 50 |
| Macaroni & Cheese | 8 oz. | 200° | | 2 | 18 gallons | 300 | 35 gallons | 525 |
| Rice | 4 oz. | 350° | 225° | 1 | 20# raw | 320 | 40# | 650 |
| Spaghetti | 4 oz. | 350° | 225° | 2 | 8# raw | 200 | 12# | 300 |

CONTINUED 4

SECTION 4 TEST KITCHEN BULLETIN

| ITEM | PORTION SIZE | THERMOSTAT SETTING | | BATCHES PER HOUR | 30 Gal. PER LOAD | | 40 Gal. PER LOAD | |
|--------------------|-----------------|-----------------------|-------|---------------------|------------------|-------|------------------|-------|
| | | | | | QTY. | YEILD | QTY. | YEILD |
| MEAT, POULTRY | | | | | | | | |
| Bacon | 3 Slices | 350 ° | | 12 | 2# | 10 | 3# | 15 |
| Beef | | | | | | | | |
| American Chop Suey | 6 oz. | 400 ° | 225 ° | 2 | 18 Gal. | 350 | 35 Gal. | 700 |
| Beef Stew | 8 oz. | 300 ° | | -- | 18 Gal. | 280 | 35 Gal. | 560 |
| Corn Beef Hash | 5 oz. | 400 ° | | 5 | 16# | 50 | 25# | 75 |
| Cheeseburger | 3 oz. | 300 ° | | 12 | 7# | 35 | 10# | 50 |
| Hamburger | 3 oz. | 300 ° | | 15 | 7# | 35 | 10# | 50 |
| Meatballs | 1 oz. | 400 ° | 225 ° | 3 | 12 1/2# | 65 | 18# | 100 |
| Pot Roast | 2 oz. | 350 ° | 200 ° | -- | 120# | 500 | 180# | 750 |
| Salisbury Steak | 5 oz. | 400 ° | | 3 | 16# | 50 | 24# | 75 |
| Sirloin Steak | 6 oz. | 400 ° | | 5 | 15# | 40 | 22 1/2# | 60 |
| Swiss Steak | 4 oz. | 300 ° | 200 ° | 1 | 25# | 100 | 40# | 160 |
| Chicken | | | | | | | | |
| Pan-Fried | 2 1/4's | 350 ° | | 3 | 50 Pieces | 25 | 80 Pieces | 40 |
| Whole | 2 oz. | 350 ° | 200 ° | -- | 16-5# | 200 | 24-5# | 265 |
| Frankfurters | | | | | | | | |
| Grilled | 2 oz. | 300 ° | | 8 | 22# | 176 | 33# | 264 |
| Boiled | 2 oz. | 250 ° | | 12 | 16# | 128 | 25# | 200 |
| Ham Steak | 3 oz. | 400 ° | | 8 | 10# | 50 | 15# | 75 |
| Pork Chops | 5 oz. | 350 ° | | 4 | 15# | 50 | 25# | 75 |
| Sausage Links | 3 Links | 350 ° | | 7 | 30# | 120 | 45# | 180 |
| Turkey | | | | | | | | |
| Off Carcass | 2 oz. | 400 ° | 200 ° | -- | 3-26-30# | 200 | 4-26-30# | 275 |
| On Carcass | 2 oz. | 400 ° | 200 ° | -- | 4-16-20# | 175 | 6-16-20# | 265 |
| VEGETABLES | | | | | | | | |
| Canned | 3 oz. | 400 ° | | 6 | 30# | 125 | 45# | 200 |
| Freash | | | | | | | | |
| Beans | 3 oz. | 400 ° | | 3 | 25# | 125 | 50# | 250 |
| Beets | 3 oz. | 400 ° | | 1 | 30# | 125 | 60# | 300 |
| Broccoli | 3 oz. | 400 ° | | 3 | 25# | 125 | 40# | 200 |
| Cabbage | 3 oz. | 400 ° | | 5 | 20# | 80 | 30# | 125 |
| Carrots | 3 oz. | 400 ° | | 2 | 35# | 150 | 70# | 300 |
| Cauliflower | 3 oz. | 250 ° | | 5 | 15# | 75 | 25# | 125 |
| Corn | 1 ear | 400 ° | | 8 | 50 ears | 50 | 75 ears | 75 |
| Potatoes | 3 oz. | 400 ° | | 2 | 40# | 200 | 60# | 300 |
| Spinach | 4 oz. | 225 ° | | 10 | 6# | 25 | 9# | 35 |
| Turnips | 4 oz. | 400 ° | | 2 | 20# | 100 | 30# | 150 |
| Frozen | | | | | | | | |
| Beans | 3 oz. | 400 ° | | 6 | 15# | 60 | 22 1/2# | 90 |
| Lima Beans | 3 oz. | 250 ° | | 4 | 15# | 60 | 22 1/2# | 90 |
| Broccoli | 3 oz. | 400 ° | | 8 | 12# | 50 | 18# | 75 |
| Sliced Carrots | 3 oz. | 250 ° | | 6 | 15# | 60 | 22 1/2# | 90 |
| Baby Carrots | 3 oz. | 250 ° | | 3 | 15# | 50 | 22 1/2# | 90 |
| Corn | 3 oz. | 250 ° | | 18 | 15# | 50 | 22 1/2# | 90 |
| Baby Onions | 3 oz. | 250 ° | | 7 | 15# | 50 | 22 1/2# | 90 |
| Peas | 3 oz. | 400 ° | | 10 | 15# | 75 | 22 1/2# | 110 |
| Spinach | 3 oz. | 400 ° | | 3 | 15# | 75 | 22 1/2# | 110 |

CONTINUED 4

SECTION 4 TEST KITCHEN BULLETIN

| ITEM | PORTION SIZE | THERMOSTAT SETTING | BATCHES PER HOUR | 30 Gal. PER LOAD QTY. | YIELD | 40 Gal. PER LOAD QTY. | YIELD |
|----------------------|--------------|--------------------|------------------|-----------------------|-------|-----------------------|-------|
| DESSERT ITEMS | | | | | | | |
| Butterscotch Sauce | 1 oz. | 200 ° | 1 | 18 Gal. | 2300 | 35 Gal. | 4500 |
| Cherry Cobbler | 3 oz. | 200 ° | 1 | 19 Gal. | 750 | 36 Gal. | 1500 |
| Chocolate Sauce | 1 oz. | 200 ° | 1 | 20 Gal. | 2300 | 37 Gal. | 4500 |
| Cornstarch Pudding | 4 oz. | 200 ° | 1 | 21 Gal. | 575 | 38 Gal. | 1100 |
| Fruit Gelatin | 3 oz. | 250 ° | 2 | 22 Gal. | 750 | 39 Gal. | 1500 |

TABLE 4.1
COOKING PORTIONS AND TIMES

- The UniVerse Skillet is one of the most versatile pieces of equipment to be found in any restaurant or institutional kitchen.
- This unit will stew, simmer, pan-fry, braise, grill, and sauté—and all with a very uniform heat pattern. Note: Do not attempt to deep fry with your skillet!
- For best results, the Tilting Skillet should always be preheated and allowed to cycle once.
- A great deal of heavy lifting and transferring of foods from one pan to another can be eliminated, and, therefore, pot washing will be reduced.
- This type of equipment usually reduces the total cooking time by as much as 25% on combination dishes.
- Sauces usually lose less moisture, as the cover reduces evaporation.
- Large batches of gourmet items can be prepared with less work and with more uniform results.
- Frozen vegetables can be cooked in the UniVerse Skillet in the serving pan, then removed and transferred directly to the serving line.
- The following temperatures should be used:
Simmering: maximum of 200°F
Sautéing: 225–275°F
Searing: 300–350°F
Frying: 325–375°F
Grilling: 350–425°F
- Temperatures of approximately 200°F should always be used for milk-based products, or scorching will take place. Lower temperatures (150–175°F) prevent thickening.
- Some items should be started at a high temperature and then reduced. This permits sealing for about 20% of the time and cooking for the remaining 80%.
- The cover has a lip at the back edge that directs the condensate on the cover back into the skillet.
- The unit tilts easily to 90°, and receiving pan is always approximately 2 inches from the pouring lip of the skillet.
- The stainless steel UniVerse Skillet is rapidly cleaned with a mild detergent. Water, waste, and scraps are easily removed into the receiving pan for disposal. (It is always recommended that this type of unit be presoaked if possible.)
- Breakfast foods such as sausage, bacon, pancakes, fried eggs, scrambled eggs, and French toast are a few of the more common items that can be cooked in the UniVerse Skillet.
- When cooking meat or poultry, all pieces should be of fairly uniform size and weight and should be turned at least once while simmering.
- This unit can be converted to a proof box by placing a small amount of water in the pan to form steam and then placing the food in another pan. The thermostat should be set very low (100–150°F).
- The unit can also be used as a holding cabinet by adding water and setting the thermostat at approximately 175°F.
- When using water over and over for vegetable cookery, be sure to add water occasionally to keep level at about 3–4 inches. Thermostat should be set at 250°F.
- Perforated 21/2"-deep pans are suggested for vegetables for the most satisfactory results. The pan can then be removed easily and transferred to the serving line.

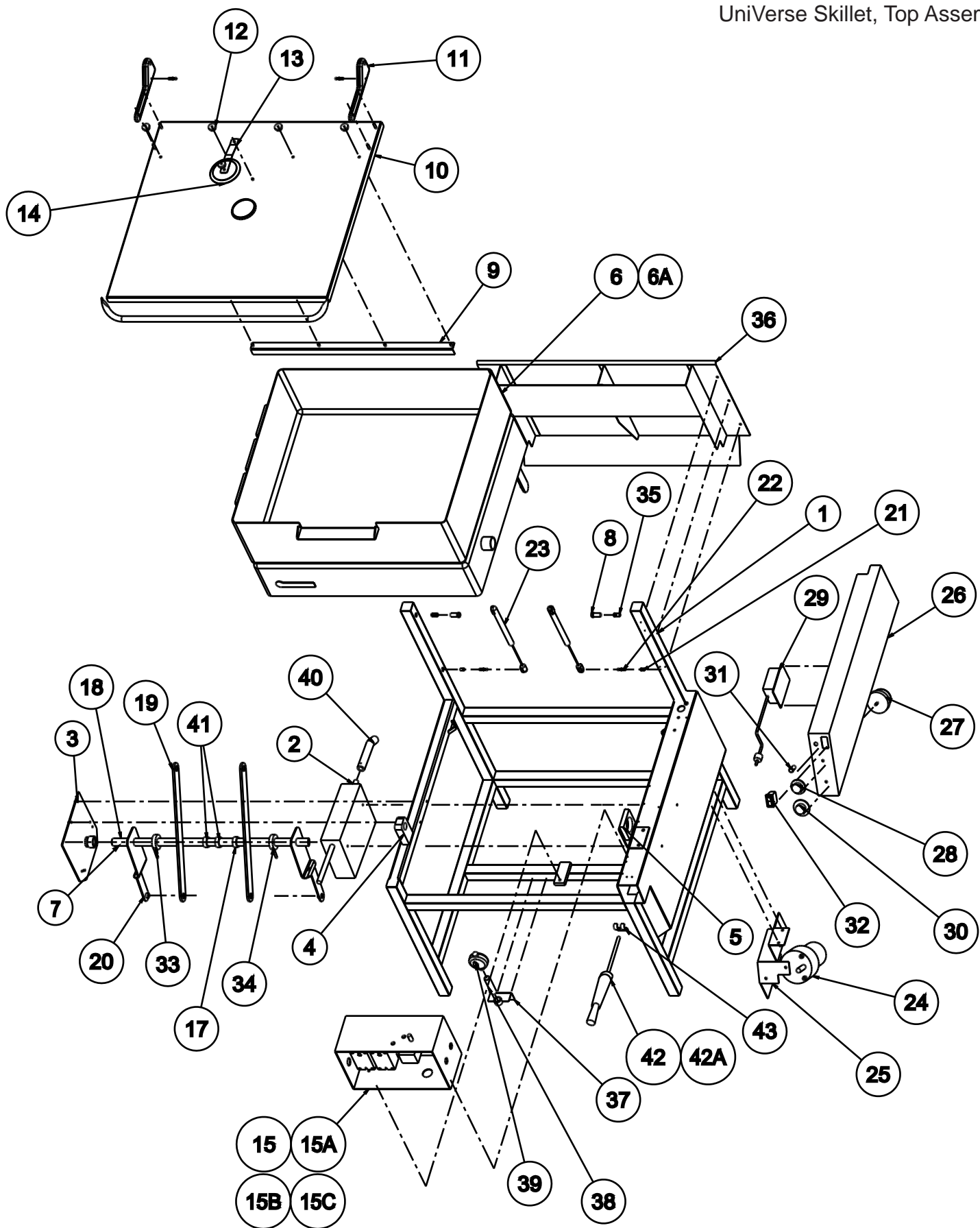
SECTION 5 ILLUSTRATED PARTS LIST

UniVerse Skillet, Top Assembly

| ITEM | 30 GAL. | 40 GAL. | DESCRIPTION | 30 GAL. | 40 GAL. |
|------|---------|---------|---|---------|---------|
| 1 | 98-1296 | 98-1295 | FRAME WELD ASSY. | 1 | 1 |
| 2 | 98-1010 | 98-1010 | GEAR BOX | 1 | 1 |
| 3 | 98-1031 | 98-1031 | ASSY. BEARING SUPPORT | 1 | 1 |
| 4 | 98-1339 | 98-1339 | BEARING MOUNT LEFT | 1 | 1 |
| 5 | 98-1300 | 98-1300 | BEARING MOUNT RIGHT | 1 | 1 |
| 6 | 98-1327 | 98-1008 | PAN ASSY., STANDING PILOT | 1 | 1 |
| 6A | 98-1245 | 98-1358 | PAN ASSY., CARBORUNDUM | 1 | 1 |
| 7 | REF | REF | SHAFT | 1 | 1 |
| 8 | 08-7809 | 08-7809 | SHOULDER SCREW | 2 | 2 |
| 9 | 98-1311 | 98-1093 | STIFFENER, PAN COVER | 1 | 1 |
| 10 | 98-1310 | 98-1090 | COVER | 1 | 1 |
| 11 | 98-1012 | 98-1012 | HINGE | 2 | 2 |
| 12 | 91-9325 | 91-9325 | KNOB | 4 | 4 |
| 13 | 91-9262 | 91-9262 | ARM, VENT COVER | 1 | 1 |
| 14 | 91-9261 | 91-9261 | VENT COVER | 1 | 1 |
| 15 | 98-1346 | 98-1346 | NEMA BOX ASSY, STANDING PILOT MANUAL LIFT | 1 | 1 |
| 15A | 98-1345 | 98-1345 | NEMA BOX ASSY, STANDING PILOT POWER LIFT | 1 | 1 |
| 15B | 98-1343 | 98-1343 | NEMA BOX ASSY, CARBORUNDUM MANUAL LIFT | 1 | 1 |
| 15C | 98-1342 | 98-1342 | NEMA BOX ASSY, CARBORUNDUM POWER LIFT | 1 | 1 |
| 17 | 98-1068 | 98-1068 | WELD ASSY, CAM LIFT | 1 | 1 |
| 18 | 98-1538 | 98-1539 | WELD ASSY, TILT MECHANISM, (NEWER DESIGN) | 1 | 1 |
| 19 | 98-1258 | 98-1258 | ARM, EXTENSION | 2 | 2 |
| 20 | REF | REF | ARM, LIFT | 2 | 2 |
| 21 | 08-7810 | 08-7810 | RIVNUT, 5/16 THD | 2 | 2 |
| 22 | REF | REF | SHOCK MOUNT, COMES WITH SHOCKS, NO NUMBER | 4 | 4 |
| 23 | 08-7806 | 08-7827 | GAS SHOCK | 2 | 2 |
| 24 | 98-0985 | 98-0985 | MOTOR, POWER LIFT OPTION | 1 | 1 |
| 25 | 98-1348 | 98-1348 | WELD ASSY, MOTOR MOUNT. BRK., POWER LIFT OPTIONAL | 1 | 1 |
| 26 | 98-1281 | 98-1281 | CONTROL BOX | 1 | 1 |
| 27 | 10-5520 | 10-5520 | 60 MIN. TIMER | 1 | 1 |
| 28 | 09-5267 | 09-5267 | TIMER KNOB | 1 | 1 |
| 29 | 08-7913 | 08-7913 | THERMOSTAT | 1 | 1 |
| 30 | REF | REF | THERMOSTAT KNOB, COMES WITH THERMOSTAT, NO NUMBER | 1 | 1 |
| 31 | 10-5052 | 10-5052 | LIGHT | 1 | 1 |
| 32 | 98-1308 | 08-6320 | POWER SWITCH PLUG, MANUAL LIFT | 1 | 1 |
| 32A | 08-6320 | 08-6320 | POWER SWITCH, POWER LIFT OPTION | 1 | 1 |
| 33 | 91-9144 | 91-9144 | LEFT SPRING | 1 | 1 |
| 34 | 91-9145 | 91-9145 | RIGHT SPRING | 1 | 1 |
| 35 | 08-7813 | 08-7813 | INSERT 3/8 | 2 | 2 |
| 36 | 98-1234 | 98-1264 | FLUE BOX ASSY. | 1 | 1 |
| 37 | 98-0649 | 98-0649 | BRACKET ASSY, GAS VALVE | 1 | 1 |
| 38 | 10-2836 | 10-2836 | 3/4" X 3" B.I. NIPPLE | 1 | 1 |
| 39 | 10-8459 | 10-8459 | VALVE, MANUAL | 1 | 1 |
| 40 | 98-1216 | 98-1216 | UNIVERSAL, EXTENDED | 1 | 1 |
| 41 | 98-1326 | 98-1326 | WELD ASSY, CAM, UP AND DOWN, POWER LIFT OPTION | 2 | 2 |
| 42 | 98-1333 | 98-1333 | CRANK HANDLE, MANUAL LIFT | 1 | 1 |
| 42A | 98-1267 | 98-1267 | CRANK HANDLE, POWER LIFT | 1 | 1 |
| 43 | 98-1270 | 98-1270 | HANDLE BRACKET, MANUAL LIFT | 1 | 1 |

SECTION 5 ILLUSTRATED PARTS LIST

UniVerse Skillet, Top Assembly



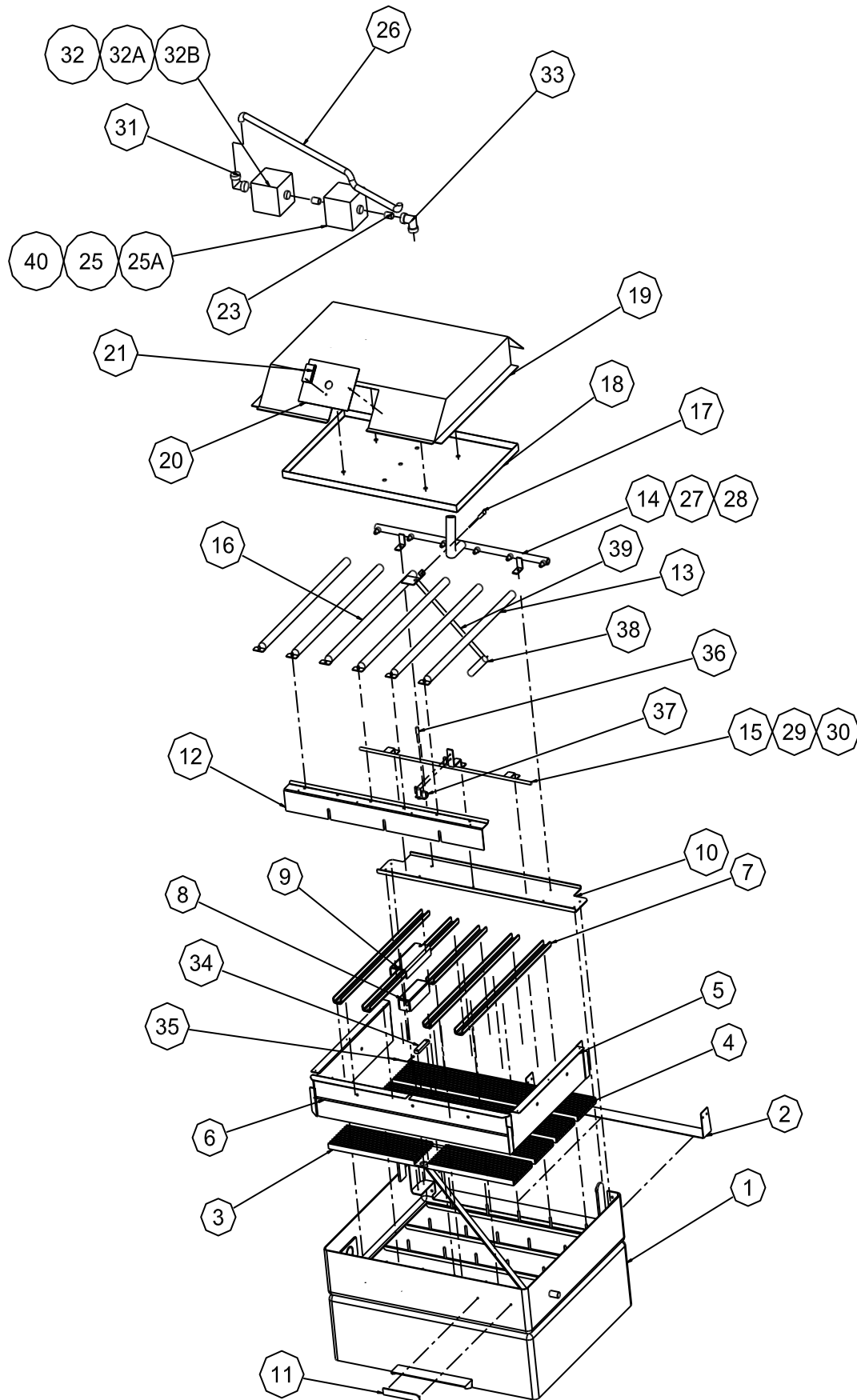
SECTION 5 ILLUSTRATED PARTS LIST

UniVerse Skillet, Pan Assembly

| ITEM | 30 GAL. | 40 GAL. | DESCRIPTION | 30 GAL. | 40 GAL. |
|------|---------|---------|--|---------|---------|
| 1 | 98-1245 | 98-1225 | PAN WELD ASSY. (30 GAL.) | 1 | 1 |
| 2 | 98-1249 | 98-1299 | COVER, FLUE BOX PAN | 1 | 1 |
| 3 | 98-1364 | 98-1380 | ALUMINUM EXTRUSION, MACHINED | 1 | 1 |
| 4 | 98-1318 | 98-1046 | ALUMINUM EXTRUSION | 3 | 3 |
| 5 | 98-1072 | 98-1072 | INSULATION COVER, SIDE | 2 | 2 |
| 6 | 98-1086 | 98-1071 | INSULATION COVER, FRONT (30 GAL.) | 1 | 1 |
| 7 | 98-1347 | 98-1347 | U-CHANNEL, LONG | 5 | 8 |
| 8 | 98-1242 | 98-1242 | THERMAL COUPLING | 1 | 1 |
| 9 | 98-1243 | 98-1243 | COUPLING, THERMAL SHEILDING | 1 | 1 |
| 10 | 98-1314 | 98-1050 | DEFLECTOR SHIELD (REAR) | 1 | 1 |
| 11 | 08-5894 | 08-5894 | MARKET FORGE NAME PLATE | 1 | 1 |
| 12 | 98-1223 | 98-1223 | U CHANELL, SHORT | 1 | 1 |
| 13 | 98-1009 | 98-1009 | BURNER, ASSY.(CARBORUNDUM UNITS) | 5 | 7 |
| 13A | 98-1009 | 98-1009 | BURNER, ASSY.(STANDING PILOTS UNITS) | 6 | 8 |
| 14 | 98-1076 | 98-1061 | WELD ASSY. BURNER MANIFOLD | 1 | 1 |
| 15 | 98-1032 | 98-1403 | CROSS OVER LIGHTING TUBE | 1 | 1 |
| 16 | 98-1206 | 98-1206 | BURNER, CARBORUNDUM IGNITION | 1 | 1 |
| 17 | 08-6452 | 08-6452 | FLAME SENSOR, CARBORUNDUM UNITS | 1 | 1 |
| 18 | 98-1074 | 98-1073 | PANEL, BURNER COVER, INSULATION RETAINER | 1 | 1 |
| 19 | 98-1075 | 98-1055 | BURNER SHIELD COVER | 1 | 1 |
| 20 | 98-1410 | 98-1410 | ACCESS PANEL, BURNER COVER | 1 | 1 |
| 21 | 98-1411 | 98-1411 | ACCESS PANEL COVER | 1 | 1 |
| 22 | | | | | |
| 23 | 10-2864 | 10-2864 | PIPE 1/2" X 2" LONG CARBORUNDUM UNITS | 3 | 3 |
| 23A | 10-2864 | 10-2864 | PIPE 1/2" X 2" LONG STANDING PILOT UNITS | 2 | 2 |
| 24 | | | | | |
| 25 | 09-1150 | 09-1150 | REGULATOR, NATURAL GAS, CARBORUNDUM | 1 | 1 |
| 25 | 09-1151 | 09-1151 | REGULATOR, PROPANE, CARBORUNDUM | 1 | 1 |
| 26 | 98-1063 | 98-1063 | FLEX HOSE | 1 | 1 |
| 27 | 10-0957 | 10-0957 | ORIFICE, NATURAL GAS | 6 | 8 |
| 28 | 10-2921 | 10-2921 | ORIFICE, PROPANE | 6 | 8 |
| 29 | 10-6481 | 10-6481 | ORIFICE, CARY OVER TUBE, NATURAL GAS | 1 | 1 |
| 30 | 10-6482 | 10-6482 | ORIFICE, CARY OVER TUBE, PROPANE | 1 | 1 |
| 31 | REF | REF | ELBOW, COMES WITH FLEX HOSE, NO NUMBER | 1 | 1 |
| 32 | 98-1481 | 98-1481 | GAS VALVE, NATURAL GAS | 1 | 1 |
| 32A | 98-1481 | 98-1481 | GAS VALVE, PROPANE, (NEED ITEM # 40) | 1 | 1 |
| 32B | 08-7108 | 08-7108 | GAS VALVE, CARBORUNDUM UNITS | 1 | 1 |
| 33 | 10-2811 | 10-2811 | 1/2" STREET ELBOW | 1 | 1 |
| 34 | 08-6383 | 08-6383 | HI LIMIT THERMOSTAT | 1 | 1 |
| 35 | 08-6305 | 08-6305 | TEMPERATURE SENSOR | 1 | 1 |
| 36 | 10-4758 | 10-4758 | FLAME SENSOR, STANDING PILOT | 1 | 1 |
| 37 | 10-5812 | 10-5812 | STANDING PILOT, NATURAL GAS | 1 | 1 |
| 37A | 98-1199 | 98-1199 | STANDING PILOT PROPANE | 1 | 1 |
| 38 | 10-8259 | 10-8259 | IGNITOR, CARBORUNDUM UNITS | 1 | 1 |
| 39 | 08-7849 | 08-7849 | 1/4" O.D S.S FLEX TUBING, 18" LG | 2 | 2 |
| 40 | 08-7902 | 08-7902 | KIT, CONVERSION, NATURAL TO PROPANE | 1 | 1 |

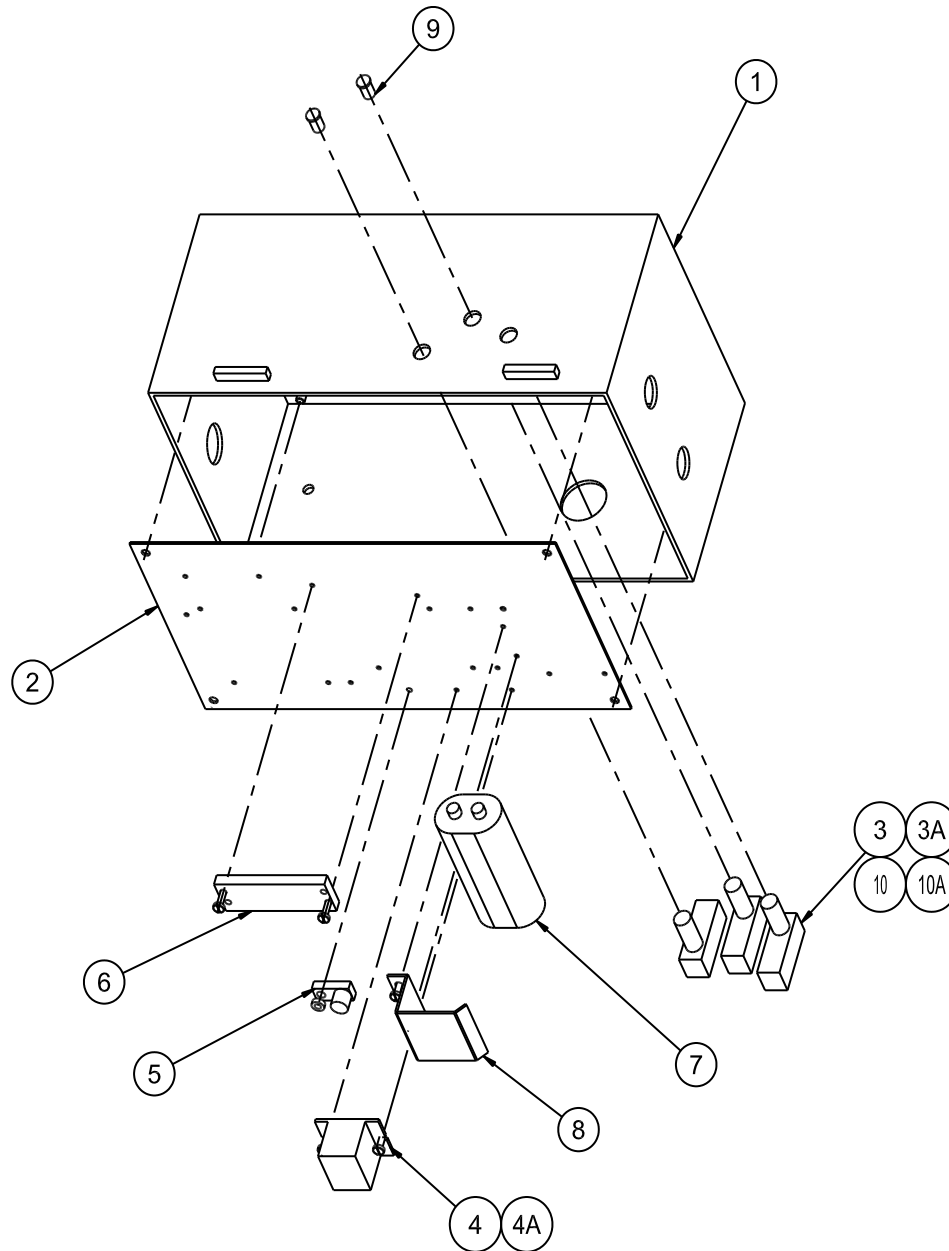
SECTION 5 ILLUSTRATED PARTS LIST

UniVerse Skillet, Pan Assembly



SECTION 5 ILLUSTRATED PARTS LIST

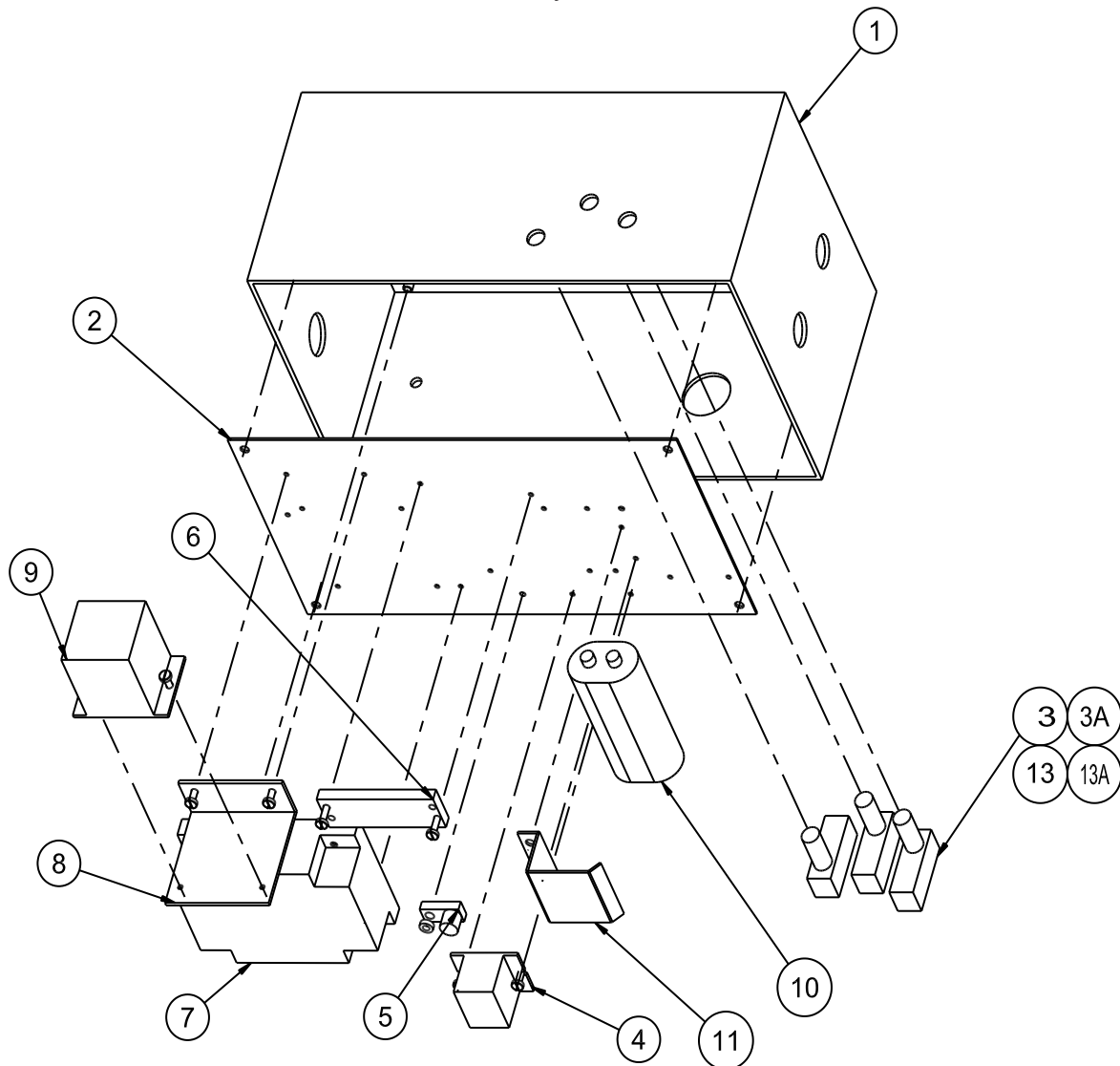
UniVerse Skillet, Standing Pilot Nema Box Assembly



| ITEM | PART NO. | DESCRIPTION | QTY. |
|------|----------|--|------|
| 1 | 98-1336 | NEMA BOX, LARGE | 1 |
| 2 | 98-1265 | MOUNTING PLATE, NEMA BOX | 1 |
| 3 | 08-7901 | MICROSWITCH, POWER TILT UNITS | 3 |
| 3A | 08-7901 | MICROSWITCH, MANUAL TILT UNITS | 1 |
| 4 | 10-5503 | SECTION, TERMINAL BLOCK, BLACK | 2* |
| 4A | 10-5070 | END PIECE, TERMINAL BLOCK, BLACK | 1 |
| 5 | 10-5220 | ELECTRICAL GROUND | 1 |
| 6 | 10-6005 | TERMINAL STRIP | 1 |
| 7 | REF | CAPACITOR, COMES WITH MOTOR | 1 |
| 8 | 91-9178 | CAPACITOR BRACKET, POWER LIFT OPTION | 1 |
| 9 | 08-7826 | MICROSWITCH HOLE PLUG, MANUAL TILT UNITS | 2 |
| 10 | 08-7846 | BOOT, RUBBER, MICROSWITCH | 1 |
| 10A | 08-7846 | BOOT, RUBBER, MICROSWITCH | 2* |

SECTION 5 ILLUSTRATED PARTS LIST

UniVerse Skillet, Carborundum Nema Box Assembly



| ITEM | PART NO. | DESCRIPTION | QTY. |
|------|----------|--|------|
| 1 | 98-1336 | NEMA BOX, LARGE | 1 |
| 2 | 98-1265 | MOUNTING PLATE, NEMA BOX | 1 |
| 3 | 08-7901 | MICROSWITCH, POWER TILT UNITS | 3 |
| 3A | 08-7901 | MICROSWITCH, MANUAL TILT UNITS | 1 |
| 4 | 10-5503 | SECTION, TERMINAL BLOCK, BLACK | 2* |
| 4A | 10-5070 | END PIECE, TERMINAL BLOCK, BLACK | 1 |
| 5 | 10-5220 | ELECTRICAL GROUND | 1 |
| 6 | 10-6005 | TERMINAL STRIP | 1 |
| 7 | 08-7110 | IGNITION MODULE | 1 |
| 8 | 98-1344 | BRACKET MOUNTING, TRANSFORMER | 1 |
| 9 | 08-6450 | TRANSFORMER 24V | 1 |
| 10 | REF | CAPACITOR, COMES WITH MOTOR | 1 |
| 11 | 91-9178 | CAPACITOR BRACKET, POWER LIFT OPTION | 1 |
| 12 | 08-7826 | MICROSWITCH HOLE PLUG, MANUAL TILT UNITS | 2 |
| 13 | 08-7846 | BOOT, RUBBER, MICROSWITCH | 1 |
| 13A | 08-7846 | BOOT, RUBBER, MICROSWITCH | 2* |

SECTION 6 TROUBLESHOOTING & MAINTENANCE

| PROBLEM | PROBABLE CAUSE | REMEDY | PART NUMBER |
|-------------------------|---|---|---|
| 1. Uneven Heating. | a. Temperature control out of calibration or defective. | a. Calibrate or replace. | a. 08-6365 |
| 2. Signal Light Out. | a. Burnt out bulb. b. Broken temperature control. c. Loose electrical connection. | a. Replace. b. Replace. c. Repair. | a. 10-5052 b. 08-6365 |
| 3. Unit fails to heat. | a. Circuit breaker is off. b. Malfunction of interlock switch. c. Broken ignitor module. d. Broken ignitor. e. Broken flame sensor. | a. Reset circuit breaker. b. Adjust or replace. c. Replace. d. Replace. e. Replace. | b. 09-6465 c. 08-7110 d. 10-8259 e. 08-6452 10-4758 |
| 4. No 110 Volts output. | a. Defective temperature control. b. Broken temperature sensor. | a. Replace. b. Replace. | a. 08-6365 b. 08-6305 |
| 5. No gas to unit. | a. Defective gas valve. | a. Replace. | a. 10-7686 10-7683 08-7108 09-1150 09-1151 |

CALIBRATION OF TEMPERATURE CONTROL

1. Ensure that pan is empty and clean before calibrating.
2. Place a surface thermometer on left or right rear sides, 3" from sides of griddle surface.

NOTE: Check that magnets on thermometer extend through holes in circular base plate and are in complete contact with griddle surface.

3. Set temperature control knob at 375°F (191°C).
4. Allow skillet to preheat and stabilize 2–3 cyc
5. Record thermometer reading. If a temperature of 370°–380°F (188°–193°C) is recorded, procedure is complete. If not, go on to step 6.
6. Remove control box cover by removing screw in rear and right side of cover.
7. Locate temperature control circuit board (see Figure 6.1) and calibrate as follows:
 - a. If temperature goes above 375 °F (191°C), turn setpot labeled HI counterclockwise to decrease temperature.
 - b. If temperature goes below 375 °F (191°C), turn setpot labeled HI clockwise to increase temperature.

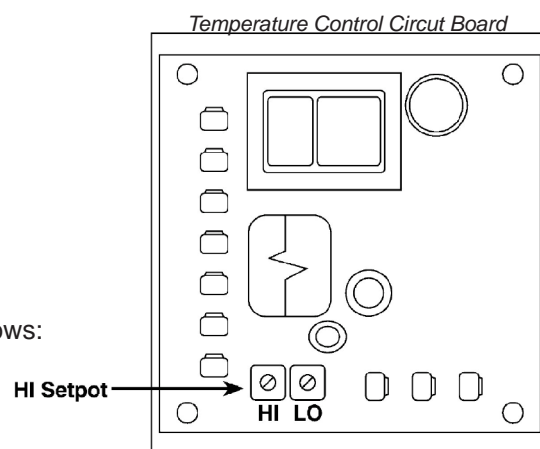


Fig. 6-1

NOTE: Turn the HI setpot only. Be careful when turning setpot—just a slight turn (approximately 22°) will change temperature by 25°F.

8. Allow skillet to cycle three (3) times. This cycling allows temperature control to stabilize.
9. Record thermometer reading when pilot light goes out. If a temperature of 370°–380°F (188°–193°C) is recorded, calibration procedure is complete. If not, repeat steps 7 and 8 until appropriate temperature is recorded.
10. Replace control box cover by pushing down and replacing screw in rear and right side of cover.

SECTION 6 TROUBLESHOOTING & MAINTENANCE

REPLACEMENT OF TEMPERATURE CONTROL

1. Place circuit breaker in off position.
2. Remove skirted dial knob by pulling it off the control box cover.
3. Remove control box cover by removing screw in rear and right side of cover.
4. Disconnect all wire leads from temperature control.

NOTE: Leads should be marked appropriately to facilitate re-installation.

5. Remove temperature control by removing two (2) pan head nuts from side of control box.
6. Install new temperature control and reverse steps 1–5.

ADJUSTMENT OF INTERLOCK SWITCH

1. Tilt skillet pan all the way in the downright position.

NOTE: If adjusting the interlock switches for the tilt mechanism in a power tilt unit, the pan will have to be all the way in the upright position to adjust one of the switches.

2. Place circuit breaker in off position.
3. Open the nema box by loosening the two screws at the top of the nema box.
4. Loosen the bottom nut of the switch until it contacts with the cam and depresses the plunger on the switch.
6. Close and fasten the nema box by tightening the 2 screws at the top of the box.
7. Place circuit breaker in on position. 5. Tighten the top nut on the switch to keep the switch in the desired location.

CLEANING

1. The skillet should be cleaned daily.
2. Wash the skillet with a mild detergent and hot water. If food is stuck to the surface of the skillet pan, soak it and use a little heat to loosen the food. Then, wash with clear water and dry.
3. Be sure to wash under the skillet cover and rinse with clear water.
4. Check the skillet pouring lip corners to be sure they are clean. Also, wash around the exterior of the skillet. Rinse with clear water and air dry.